

TREATMENT OF ADSORBENT TO ENHANCE OF ADSORBENT
CAPACITY FOR ACETYLENIC COMPOUNDS

ABSTRACT OF THE INVENTION

5 Processes using heterogeneous adsorbents are disclosed for
purification of olefin streams, such as are produced by thermal
cracking of hydrocarbons, to obtain a feedstock suitable for
formation of olefin polymers. These purification processes
comprises: providing an impure gaseous mixture; passing the
10 impure mixture through a bed of regenerated adsorbent which is
free of a substantial amount of carbon monoxide; effecting, in the
presence of an essentially dihydrogen-free atmosphere within
the bed, selective adsorption of the contained acetylenic
impurities with the adsorbent until levels of the acetylenic
15 impurities in the effluent mixture increase to a limiting level in a
range downward from about 1 parts per million by volume; and
thereafter regenerating the resulting bed of adsorbent in the
presence of a reducing gas comprising dihydrogen which reducing
gas is free of a substantial amount of carbon monoxide.